

## Quiz 3

1. (4 points) Rewrite the Linear System below as

$$\begin{cases} 3x_1 - 4x_2 = 11 \\ -x_1 - 3x_2 = 2 \end{cases}$$

a. a vector equation

b. a matrix equation

2. (6 points) Use the three vectors  $\bar{u}$ ,  $\bar{v}$ , and  $\bar{w}$  as defined below to compute the expressions in parts (a) through (c) as vectors.

$$\bar{u} = \begin{bmatrix} 1 \\ -5 \\ 0 \end{bmatrix}, \quad \bar{v} = \begin{bmatrix} 4 \\ -2 \\ -7 \end{bmatrix}, \quad \bar{w} = \begin{bmatrix} 2 \\ -3 \end{bmatrix}$$

a.  $\bar{u} + \bar{v}$

b.  $3\bar{u} - 5\bar{v}$

c.  $2\bar{w} - \bar{u}$